

CLAIMS:

1. A mobile communication point for use in a mobile radio network comprising a plurality of communication points, each capable of communicating with other communication points, the communication point comprising a transmitter/receiver for sending signals to and receiving signals from the other communication points, at least one of the communication points including means to switch that communication point between a high power mode in which it is able to transmit or receive signals and a low power mode in which it spends most of its time in a sleep state wherein it is unable to transmit or receive signals and a small part of its time able to transmit or receive signals.
2. A mobile communication point according to claim 1 in which when the communication point is in low power mode it is controlled to come out of sleep state periodically and to broadcast a packet of data containing its unique identity.
3. A mobile communication point according to claim 2 in which the communication point waits for a short period after broadcast to detect whether any other communication point is attempting to transmit back to it before returning to sleep state.
4. A mobile communication point according to claim 3 in which the communication point remains able to transmit or receive signals for a longer period if it receives a response addressed to it during the receive period.
5. A mobile communication point according to any preceding claim in which the communication point includes

means responsive to an external input to cause the switching means to switch the communication point from low power mode to high power mode.

5           6.    A mobile communication point according to claim 5 in which the means responsive to an external input comprises a low power RF detection circuit responsive to a radio transmission.

10           7.    A mobile communication point according to claim 5 in which the means responsive to an external input comprises an ultrasonic detector.

          8.    A mobile communication point according to claim 5 in which the means responsive to an external input comprises an infrared detector.

15           9.    A mobile communication point according to claim 5 in which the means responsive to an external input comprises a manual input.

20           10.   A communication point according to any preceding claim comprising a data storage means storing data identifying the communication point and storing data identifying communication points which have been interacted with recently, and wherein the communication point determines whether data about a second communication point is stored in its data storage means upon receipt of a transmission from the second communication point.

25           11.   A communication point according to claim 10 in which the communication point is responsive to a transmission from a second communication point to send interrogation signals to the second communication point.

12. A communication point according to claim 10 or 11 in which the communication point can remain active at all times.

5 13. A communication point according to claim 10, 11 or 12 in which the first communication point is responsive to a request from a second communication point to transmit data about a third communication point from its storage means to the second communication point.

10 14. A mobile radio network comprising a plurality of communication points each capable of communicating with any other communication point, each communication point comprising a transmitter/receiver for sending signals to and receiving signals from other communication points, and in which at least one communication point includes means  
15 to switch the communication point between a high power mode in which it is able to receive or transmit signals and a low power mode and in which the communication point spends most of its time in a sleep mode wherein it is unable to transmit or receive signals.

20 15. A communication point for use in a mobile radio network comprising a plurality of communication points, each capable of communicating with any other communication point, the communication point comprising a  
25 transmitter/receiver for sending signals to and receiving signals from the other communication points, a data storage means storing data identifying the communication point, and storing data identifying communication points which have been interacted with recently, and wherein the communication point determines whether data about a second  
30 communication point is stored in its data storage means upon receipt of a transmission from the second communication point.

16. A communication point according to claim 15 in which the communication point is responsive to a transmission from a second communication point to send interrogation signals to the second communication point.

5        17. A communication point according to claim 16 which stores the data received in response to the interrogation signals.

10        18. A communication point according to claim 15, 16 or 17 in which the communication point can remain active at all times.

15        19. A communication point according to claim 15, 16, 17 or 18 in which the first communication point is responsive to a request from a second communication point to transmit data about a third communication point from its storage means to the second communication point.

20        20. A mobile radio system comprising a plurality of communication points each capable of communicating with other communication points, each communication point comprising a transmitter/receiver for sending signals to and receiving signals from other communication points, a data storage means storing data identifying communication points which have been interacted with recently, wherein a first communication point is responsive to a transmission from a second communication point to determine whether data about the second communication point is stored in its storage means.

30        21. A mobile radio system according to claim 20 in which the first communication point is responsive to a transmission from a second communication point to send interrogation signals to the second communication point.

22. A mobile radio system according to claim 20 or  
21 in which the first communication point can remain  
active at all times and other communication points spend  
most of the time in sleep mode wherein they are unable to  
5 receive or transmit signals.

23. A mobile radio system according to claim 20, 21  
or 22 in which the first communication point is responsive  
to a signal from a second communication point to transmit  
data about a third communication point from its storage  
10 means to the second communication point.

24. A communication point according to claim 13 or  
19 in which the first communication point provides data  
about the timing and frequency of transmissions from and  
to the second and third nodes, whereby the second and  
15 third nodes may establish direct communication between  
themselves.